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Catalog of the phylloxerids of the world (Hemiptera, Phylloxeridae)

Colin Favret[1], Roger L. Blackman[2], Gary L. Miller[3], Benjamin Victor[4]

1 *University of Montreal, Biodiversity Centre, 4101 rue Sherbrooke est, Montreal, Quebec, H1X 2B2 Canada* **2** *The Natural History Museum, Department of Life Sciences, Cromwell Rd, London SW7 5BD, United Kingdom* **3** *USDA-ARS, Systematic Entomology Laboratory, 10300 Baltimore Ave, Bldg. 005, BARC-West, Beltsville, MD 20705* **4** *University of Montreal, Classical Studies Centre, 3774 rue Jean-Brillant, Montreal, Quebec, H3T 1P1 Canada*

Corresponding author: *Colin Favret* (ColinFavret@AphidNet.org)

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Abstract

A taxonomic and nomenclatural catalog of the phylloxerids (Hemiptera, Phylloxeridae) is presented. Six family-group names are listed, three being synonyms. Thirty-five genus-group names, of which six are subjectively valid, are presented with their type species, etymology, and grammatical gender. Ninety-four species-group names are listed, of which 73 are considered subjectively valid. This is the last group of Aphidomorpha to be catalogued, bringing the list of valid extant species to 5,218.

Keywords

Aphidomorpha, nomenclature, *Phylloxera*, Sternorrhyncha, taxonomy

Introduction

Phylloxeridae is a small family of Hemiptera, closely related to Adelgidae and Aphididae. Little is known of the biology of most of the family's 69 species, although that of the economically important grape phylloxeran, *Daktulosphaira vitifoliae* (Fitch), has been studied in detail. Most species of phylloxerid feed on species of Juglandaceae or Fagaceae, with a large number forming galls on North American hickories (*Carya* spp.). Host alternation exists within the family (Stoetzel 1985) but it is either rare or understudied. Two fossil species are known, *Palaeophylloxera seilacheri* Heie and Peñalver 1999 and *Acanthochermes longirostris* Wegierek 2003, from the Miocene and Eocene, respectively.

Phylloxeridae is one of three extant families in the infraorder Aphidomorpha (Hemiptera, Sternorrhyncha) (Heie and Wegierek 2009). Whereas the Aphididae have been catalogued several times (Wilson and Vickery 1918, Eastop and Hille Ris Lambers 1976, Remaudière and Remaudière 1997) and the Adelgidae recently (Favret et al. 2015), the Phylloxeridae have not been comprehensively treated until now. Including the fossil taxa (Heie and Wegierek 2011), the entire infraorder has now been fully catalogued: 5,218 valid extant and 314 valid extinct species (Aphid.SpeciesFile.org).

In this catalog, we present six family-group, 35 genus-group, and 94 species-group names of extant phylloxerids. The family-group names include two valid subfamilies and two valid tribes and three subjective synonyms. The genus-group names include six valid names, 21 junior subjective synonyms, three junior objective synonyms, three junior homonyms, and two unavailable names. The species-group names include four subspecies (not including nominotypical subspecies), 14 subjective synonyms, one junior primary homonym, two nomina dubia, and four unavailable names.

The name Phylloxeridae in English is usually pronounced with the accent on the third syllable. However, the name of its type genus, *Phylloxera*, is often pronounced with an accent on the second. Because the *e* of *xērós* is an eta, the word made from it, once written in Roman letters and given Latin endings, must be considered to have a long *e*. The penultimate syllable of a Latin word must be accented when it contains such a long vowel and it is a fixed principle that the accentuation of Latin words is to be kept when they are borrowed into English. Therefore, strictly-speaking, only accentuation of the third syllable of *Phylloxera* is historically justified.

Russell (1975) described the complex history of the name of the grape phylloxeran, including the correct spelling of its generic name, *Daktulosphaira* Shimer 1866. Shimer also established *Dactylosphaera* (1867), probably meaning the latter to be an emended spelling of the former. The philological side of the alternate spellings can be stated briefly: k and c have both been used to transliterate classical Greek kappa, u and y to render upsilon, ai and ae the diphthong alpha+iota. C, y and ae were the preferred transliterations in classical Latin. K, u and ai are mostly used in linguistic circles that seek a more direct reflection of the phonetics of ancient Greek, bypassing the intermediary of Latin. Zoological nomenclature imposes Latin terminations, hence supposes Latinization of Greek (and other non-Latin) elements. *Dactylosphaera* is therefore the

spelling more in the spirit of the system, although per ICZN Article 32.5.1 (International Commission on Zoological Nomenclature 1999), "incorrect transliteration or Latinization … are not to be considered inadvertent errors." In addition to these two official spellings, other authors have used every possible combination of c/k, u/y and ae/ai to refer to the grape phylloxeran, giving *Dactulosphaera* (e.g., Kleeburg and Hummel 2001), *Dactulosphaira* (e.g., Fahrentrapp et al. 2015), *Dactylosphaira* (e.g., Alleweldt et al. 1991), *Daktulosphaera* (e.g., Loxdale 2008), *Daktylosphaera* (e.g., Tecchio et al. 2007), and *Daktylosphaira* (e.g., Torregrossa et al. 1997).

In any case, Shimer (1866, 1867) established different type species for *Daktulosphaira* and *Dactylosphaera*, thus the two spellings must be considered independent, available genus-group names (Wilson 1910). *Dactylosphaera globosa* Shimer 1867, one of a large number of North American hickory-feeding species, is the type species of its genus. As a consequence, *Dactylosphaera* has priority over all other generic names attributable to this distinct group. These include *Xerophylla*, described by Walsh later the same year (1867), *Euphylloxera* Del Guercio 1908, *Notabilia* Mordvilko 1909, *Paramoritziella* Grassi 1912, *Parapergandea* Börner 1930, *Pergandea* Börner 1908b, and *Troitzkya* Börner 1930. If we consider a key diagnostic character of the hickory-feeding species, the lack of abdominal spiracles, we can add *Acanthaphis* Del Guercio 1908 and *Moritziella* Börner 1908b to the list. It will require a thorough taxonomic revision of the phylloxerid family to correctly assign the various species, many of which are hardly known, to any of these listed generic names. Given this fact, the unfortunate history and spelling problems associated with *Dactylosphaera* and *Daktulosphaira*, and the fact that the identity and validity of the type species of *Dactylosphaera* may be questionable (Russell 1975), we have chosen to present a conservative classification, retaining the majority of species within the genus *Phylloxera* Boyer de Fonscolombe 1834. At some future date when more information is available, it may in particular be necessary to formalize a distinction between the Palearctic species (abdominal spiracular plates present) and the Nearctic species, species that typically form galls on hickories (abdominal spiracular plates absent, where known). As with the Catalog of Adelgidae (Favret et al. 2015), it is our hope that the present Catalog of Phylloxeridae will serve to stimulate interest and research on this insect group.

Also as with other recent catalogs of groups of Aphidomorpha, the etymology and grammatical gender of genus-group names has been included (Favret et al. 2008, 2009, 2015, Cortés Gabaudan et al. 2011, Nieto Nafría et al. 2011). Where original descriptions are listed with two page numbers, the first refers to a nomenclaturally valid diagnosis (e.g., a dichotomous key) and the second refers to the formal description. Valid names are listed in bold and synonyms preceded by '='. The rank-specific endings of family-group synonyms are replaced by '–'. Species-group names are presented according to their current generic placement, their original generic placements in parentheses. An alphabetical index following the catalog provides the current placement of each name. Future updates will be published on Aphid Species File (Aphid.SpeciesFile.org).

Catalogue

PHYLLOXERIDAE Herrich-Schaeffer 1854
Subfamily **PHYLLOXERINAE** Herrich-Schaeffer 1854

Tribe **ACANTHOCHERMESINI** Börner 1913: 667
Original spelling. Acanthochermesini
Type genus. *Acanthochermes* Kollar 1848

ACANTHOCHERMES Kollar 1848: 191
Type species. *Acanthochermes quercus* Kollar 1848, by original monotypy
Etymology. Greek ákantha 'thorn' + *Chermes* [Hemiptera]
Gender. Masculine
quercus Kollar 1848: 191 (*Acanthochermes*)
=*balbianii* (Lichtenstein 1874a: 782) (*Phylloxera*)
similiquercus Jiang et al. 2009: 44,45 (*Acanthochermes*)

Tribe **PHYLLOXERINI** Herrich-Schaeffer 1854:VII
Original spelling. Phylloxeriden
Type genus. *Phylloxera* Boyer de Fonscolombe 1834
=DACTYLOSPHAER– Shimer 1867: 2
Original spelling. Dactylosphaeridae
Type genus. *Dactylosphaera* Shimer 1867
=MORITZIELL– Börner 1908b: 607
Original spelling. Moritziellini
Type genus. *Moritziella* Börner 1908b
=VACUN– Herrich-Schaeffer 1854:VII
Original spelling. Vacuniden
Type genus. *Vacuna* von Heyden 1837

APHANOSTIGMA Börner 1909b: 61
Type species. *Phylloxera piri* Cholodkovsky 1904, by original monotypy
Etymology. Greek aphanḗs 'invisible' + -o + Greek stigma 'spot' [pterostigma]
Gender. Neuter
=*CINACIUM* Kishida 1924: 473
Type species. *Cinacium iaksuiense* Kichida 1924, by original monotypy
Etymology. Japanese Kinako 'soybean flour' + -ium
Gender. Neuter
iaksuiense (Kishida 1924: 473) (*Cinacium*)
piri (Cholodkovsky 1904: 119) (*Phylloxera*)

DAKTULOSPHAIRA Shimer 1866: 365
Type species. *Pemphigus vitifoliae* Fitch 1855, by original monotypy

Etymology. Greek dáktylos 'finger' + Greek sphaîra 'ball'
Gender. Feminine

=*PERITYMBIA* Westwood 1869: 109
Type species. *Peritymbia vitisana* Westwood 1869, by original monotypy
Etymology. Greek perí 'around' + Greek týmbos 'tomb' ["tomb-like gall"]
Gender. Feminine
Note. Some references cite Westwood 1867: 6, but this is a note referencing an oral presentation that was never published (Westwood 1877:xlvii).

=*RHIZAPHIS* Planchon in Bazille et al. 1868: 336
Type species. *Rhizaphis vastatrix* Planchon 1868, by original monotypy
Etymology. Greek ríza 'root' + *Aphis* [Hemiptera: Aphididae]
Gender. Feminine

=*RHIZOCERA* Despeissis 1896: 14
Type species. None
Etymology. Greek ríza 'root' + Greek xērós 'dry' ["root drier" per Despeissis 1896, but note, Latin cēra 'wax']
Gender. Feminine
Note. Unavailable, not proposed as a valid name. Often misattributed to Kirk 1897: 8.

=*VITEUS* Shimer 1867: 6
Type species. *Pemphigus vitifoliae* Fitch 1855, by original monotypy
Etymology. Latin 'of or pertaining to the vine'
Gender. Masculine
Note. Junior objective synonym of *Daktulosphaira* Shimer 1866

=*XERAMPELUS* Del Guercio 1900: 77,80
Type species. *Rhizaphis vastatrix* Planchon 1868, by original monotypy
Etymology. Greek xērós 'dry' + Greek ámpelos 'vine'
Gender. Masculine
Note. Junior objective synonym of *Rhizaphis* Planchon 1868

vitifoliae (Fitch 1855: 862) (*Pemphigus*)
=*pemphigoides* (Donnadieu 1887: 1246) (*Phylloxera*)
=*pervastatrix* (Börner 1910: 4) (subspecies of *Peritymbia vitifoliae* (Fitch))
=*vastatrix* (Planchon in Bazille et al. 1868: 336) (*Rhizaphis*)
=*vitisana* (Westwood 1869: 109) (*Peritymbia*)
=*vitis viniferae* (Theobald 1914: 337) (*Phylloxera*) nomen nudum
=*vulpinae* (Börner 1952: 213) (subspecies of *Viteus vitifoliae* (Fitch))

FOAIELLA Börner 1909b: 61
Type species. *Phylloxera danesii* Grassi and Foà 1907, inherited from replaced name
Etymology. (Anna) Foà [Italian entomologist] + -i + ella [diminutive suffix]
Gender. Feminine
Note. Replacement name for *Boerneria* Grassi and Foà 1908. Described as subgenus of *Peritymbia* Westwood 1869

=*BOERNERIA* Grassi and Foà 1908: 685

Type species. *Phylloxera danesii* Grassi and Foà 1907, by original monotypy

Etymology. (Carl) Börner [German entomologist] + -ia

Gender. Feminine

Note. Junior homonym of *Boerneria* Willem 1902: 4 (Collembola) and *Boerneria* Axelson 1902: 101 (Collembola). Replaced by *Foaiella* Börner 1909b

danesii (Grassi and Foà 1907: 431) (*Phylloxera*)

OLEGIA Shaposhnikov 1979: 734

Type species. *Aphanostigma ulmifoliae* Aoki 1973, by original designation

Etymology. Oleg (Vasilyevich Kovalev) [Russian entomologist] + -ia

Gender. Feminine

ulmifoliae (Aoki 1973: 144) (*Aphanostigma*)

PHYLLOXERA Boyer de Fonscolombe 1834: 222

Type species. *Phylloxera quercus* Boyer de Fonscolombe 1834, by original monotypy

Etymology. Greek phýllon 'leaf' + Greek xērós 'dry'

Gender. Feminine

=*ACANTHAPHIS* Del Guercio 1908: 156,157

Type species. *Phylloxera corticalis* Kaltenbach 1867, by original designation

Etymology. Greek ákantha 'thorn' + *Aphis* [Hemiptera: Aphididae]

Gender. Feminine

Note. Junior objective synonym of *Moritziella* Börner 1908b

=*DACTYLOSPHAERA* Shimer 1867: 290

Type species. *Dactylosphaera globosa* Shimer 1867, by original monotypy

Etymology. Greek dáktylos 'finger' + Greek sphaîra 'ball'

Gender. Feminine

=*EUPHYLLOXERA* Del Guercio 1908: 155,156

Type species. *Phylloxera foveola* Pergande 1904, by original designation

Etymology. Greek eû 'truly' + *Phylloxera*

Gender. Feminine

=*HYSTRICHIELLA* Börner 1908b: 609

Type species. *Phylloxera spinulosa* Targioni Tozzetti 1875, by original designation

Etymology. Greek hýstrix 'porcupine' + -i + -ella [diminutive suffix]

Gender. Feminine

Note. Described as subgenus of *Phylloxera* Boyer de Fonscolombe 1834

=*MICRACANTHAPHIS* Grassi in Grassi et al. 1912: 48

Type species. *Vacuna coccinea* von Heyden 1837, by original designation

Etymology. Greek mikrós 'small' + *Acanthaphis*

Gender. Feminine

=*MORITZIELLA* Börner 1908b: 608

Type species. *Phylloxera corticalis* Kaltenbach 1867, by original designation
Etymology. (Julius) Moritz [German entomologist] + -i + ella [diminutive suffix]
Gender. Feminine

=*NOTABILIA* Mordvilko 1909: 362
Type species. *Phylloxera notabilis* Pergande 1904, by original designation
Etymology. Latin notabilis 'remarkable, sizeable', inflected in the neuter plural
Gender. Neuter

=*PARAMORITZIELLA* Grassi in Grassi et al. 1912: 13
Type species. *Phylloxera caryaefoliae* Fitch 1856, by original designation
Etymology. Greek pará 'beside' + *Moritziella*
Gender. Feminine

=*PARAPERGANDEA* Börner 1930: 160
Type species. *Phylloxera caryaevenae* Fitch 1856, by original designation
Etymology. Greek pará 'beside' + *Pergandea*
Gender. Feminine

=*PARAPHYLLOXERA* Grassi in Grassi et al. 1912: 11,60
Type species. *Vacuna glabra* von Heyden 1837, by original designation
Etymology. Greek pará 'beside' + *Phylloxera*
Gender. Feminine

=*PARTHENOPHYLLOXERA* Grassi in Grassi et al. 1912: 11,62
Type species. *Parthenophylloxera ilicis* Grassi 1912, by original designation
Etymology. Greek parthénos 'girl, virgin' + *Phylloxera*
Gender. Feminine

=*PERGANDEA* Börner 1908b: 610
Type species. *Dactylosphaera conica* Shimer 1869, by original designation
Etymology. (Theodore) Pergande [American entomologist] + -a
Gender. Feminine
Note. Junior homonym of *Pergandea* Ashmead 1905: 382 (Hymenoptera). Described as subgenus of *Dactylosphaera* Shimer 1867

=*PHYLLOXERELLA* Grassi in Grassi et al. 1912: 11,54
Type species. *Phylloxerella confusa* Grassi 1912, by original designation
Etymology. *Phylloxera* + -ella [diminutive suffix]
Gender. Feminine

=*PHYLLOXEROIDES* Grassi in Grassi et al. 1912: 11,48
Type species. *Phylloxera italica* Grassi 1912, by original designation
Etymology. *Phylloxera* + Greek –ō(i)dēs 'resembling'
Gender. Masculine

=*PSYLLOPTERA* Ferrari 1872: 85
Type species. *Psylloptera quercina* Ferrari 1872, by original monotypy
Etymology. *Psylla* [Hemiptera: Psyllidae] + Greek pterá 'wings'
Gender. Feminine

=*RHANIS* von Heyden 1837: 289
Type species. None

Etymology. Greek rhanís 'drop (of a liquid)'
Gender. Feminine
Note. Unavailable, described in synonymy with *Vacuna* von Heyden 1837. Junior homonym of *Rhanis* Dejean 1836: 440 (Coleoptera)

=*TROITZKYA* Börner 1930: 160
Type species. *Dactylosphaera caryaesemen* Walsh 1867, by original designation
Etymology. (Nikolay Nikolaevich) Troitzky [Russian entomologist] + -a
Gender. Feminine

=*VACUNA* von Heyden 1837: 289
Type species. *Vacuna coccinea* von Heyden 1837, by original monotypy
Etymology. Latin Vacuna [minor goddess of ancient Italy]
Gender. Feminine

=*XEROPHYLLA* Walsh 1867: 283
Type species. *Pemphigus caryaecaulis* Fitch 1855, by subsequent designation (Börner 1930: 159)
Etymology. Greek xērós 'dry' + Greek phýllon 'leaf'
Gender. Feminine

caryaeavellana Riley 1880: 230 (*Phylloxera*)

caryaecaulis (Fitch 1855: 859) (*Pemphigus*)
=*caryaemagna* (Shimer 1869: 391) (*Dactylosphaera*)

caryaefallax Riley 1874a: 1387 (*Phylloxera*)

caryaefoliae Fitch 1856: 446 (*Phylloxera*)

caryaeglobuli Walsh 1863: 309 (*Phylloxera*)
=*hemisphericum* (Shimer 1869: 387) (*Dactylosphaera*)

caryaegummosa Riley 1874a: 1387 (*Phylloxera*)

caryaepilula (Walsh 1867: 283) (*Xerophylla*) nomen nudum

caryaeren Riley 1874a: 1387 (*Phylloxera*) original spelling *caryaereniformis* but *caryaeren* in prevailing usage (ICZN Article 33.3.1)

caryaescissa Riley 1880: 230 (*Phylloxera*)

caryaesemen (Shimer 1869: 392) (*Dactylosphaera*) specific epithet first used by Walsh (1867: 283), but not placed in combination with a genus and hence unavailable until Shimer established it as a binomen

caryaesepta (Shimer 1869)
subspecies ***caryaesepta*** (Shimer 1869: 389) (*Dactylosphaera*)
subspecies ***perforans*** Pergande 1904: 188,193 (variety of *Phylloxera caryaesepta* (Shimer 1869))

caryaevenae (Fitch 1856: 444) (*Pemphigus*)

castaneae (Haldeman 1850: 106) (*Chermes*)

castaneivora (Miyazaki 1968: 400) (*Moritziella*)

coccinea (von Heyden 1837: 289) (*Vacuna*)
=*escorialensis* Lichtenstein 1876: 130 (*Phylloxera*) nomen nudum
=*globifera* (von Heyden 1837: 289) (*Rhanis*) unavailable, described in synonymy with *Vacuna coccinea* von Heyden 1837

=*rutila* Dreyfus 1889: 95 (*Phylloxera*)
confusa Grassi in Grassi et al. 1912: 54 (*Phylloxera*)
conica (Shimer 1869: 390) (*Dactylosphaera*)
corticalis Kaltenbach 1867: 44 (*Phylloxera*)
=*iberica* Staroselsky 1892: 177 (*Phylloxera*)
=*lichtensteinii* Balbiani 1874: 645 (*Phylloxera*)
davidsoni Duncan 1922: 271 (*Phylloxera*)
deplanata Pergande 1904: 188,205 (*Phylloxera*)
depressa (Shimer 1869: 390) (*Dactylosphaera*)
devastatrix Pergande 1904: 243,248 (*Phylloxera*)
foae Börner 1909a: 26 (*Phylloxera*)
foveata (Shimer 1869: 393) (*Dactylosphaera*)
foveola Pergande 1904: 188,200 (*Phylloxera*)
fraxini Stebbins 1910: 46 (*Phylloxera*) nomen dubium, only the gall was described and it is probably not a phylloxerid
georgiana Pergande 1904: 243,249 (*Phylloxera*)
glabra (von Heyden 1837: 291) (*Vacuna*)
=*punctata* Lichtenstein 1874b:CCI (*Phylloxera*) original name *bipunctatum* but *punctata* in prevailing usage (ICZN Article 33.3.1)
globosa (Shimer 1867)
subspecies ***coniferum*** (Shimer 1869: 397) (*Dactylosphaera*)
subspecies ***globosa*** (Shimer 1867: 2) (*Dactylosphaera*)
ilicis (Grassi in Grassi et al. 1912: 62) (*Parthenophylloxera*)
intermedia Pergande 1904: 188,189 (*Phylloxera*)
italica (Grassi in Grassi et al. 1912: 48) (*Phylloxeroides*)
kunugi Shinji 1943: 2 (*Phylloxera*)
minima (Shimer 1869: 391) (*Dactylosphaera*)
notabilis Pergande 1904: 217,235 (*Phylloxera*)
perniciosa Pergande 1904: 244,251 (*Phylloxera*)
picta Pergande 1904: 188,197 (*Phylloxera*)
pilosula Pergande 1904: 188,203 (*Phylloxera*)
querceti Pergande 1904: 263 (*Phylloxera*)
quercina (Ferrari 1872: 85) (*Psylloptera*)
=*spinulosa* Targioni Tozzetti 1875: 308 (*Phylloxera*)
quercus Boyer de Fonscolombe 1834: 223 (*Phylloxera*)
=*florentina* Targioni Tozzetti 1875: 287 (*Phylloxera*)
=*scutifera* Signoret 1867: 303 (*Phylloxera*) nomen dubium; Signoret (1867) wrote he was unable to find significant differences between this species and *Phylloxera quercus* Boyer de Fonscolombe except that *scutifera* was "slightly larger and darker"; he also drew a scale-like structure (Plate 7, Figure 6) that is not of phylloxerid origin, suggesting his description included a mixture of species
=*signoreti* Targioni Tozzetti 1875: 302 (*Phylloxera*)
reticulata Duncan 1922: 271 (*Phylloxera*)

rileyi Riley 1874b: 64 (*Phylloxera*)
rimosalis Pergande 1904: 216,217 (*Phylloxera*)
russellae Stoetzel 1981: 128 (*Phylloxera*)
similans Duncan 1922: 272 (*Phylloxera*)
spinifera Pergande 1904: 261 (*Phylloxera*)
spinosa (Shimer 1869: 397) (*Dactylosphaera*)
spinuloides Pergande 1904: 243 (*Phylloxera*)
stanfordiana Ferris 1919: 103 (*Phylloxera*)
stellata Duncan 1922: 269 (*Phylloxera*)
subelliptica (Shimer 1869: 389) (*Dactylosphaera*)
symmetrica Pergande 1904
subspecies ***purpurea*** Pergande 1904: 232 (variety of *Phylloxera symmetrica* Pergande 1904)
subspecies ***symmetrica*** Pergande 1904: 218,230 (*Phylloxera*)
subspecies ***vasculosa*** Pergande 1904: 233 (variety of *Phylloxera symmetrica* Pergande 1904)
texana Stoetzel 1981: 141 (*Phylloxera*)
tuberculifera Duncan 1922: 272 (*Phylloxera*)

Subfamily **PHYLLOXERININAE** Börner 1908b: 607
Original spelling. Phylloxerinini
Type genus. *Phylloxerina* Börner 1908a

PHYLLOXERINA Börner 1908a: 94
Type species. *Phylloxera salicis* Lichtenstein 1884, by original monotypy
Etymology. *Phylloxera* + Latin -ina 'in relation to'
Gender. Feminine
=*GUERCIOJA* Mordvilko 1909: 361
Type species. *Chermes populi* Del Guercio 1900, by original designation
Etymology. (Giacomo Del) Guercio [Italian entomologist] + -ja
Gender. Feminine
=*LAUFFERELLA* Lindinger 1933: 32
Type species. *Chermes populi* Del Guercio 1900, inherited from replaced name
Etymology. (Jorge) Lauffer [German entomologist] + -ella [diminutive suffix]
Gender. Feminine
Note. Replacement name for *Pseudochermes* Bonfigli 1909. Junior objective synonym of *Guercioja* Mordvilko 1909
=*PSEUDOCHERMES* Bonfigli 1909: 398
Type species. *Chermes populi* Del Guercio 1900, by original monotypy
Etymology. Greek pseudo- 'untrue' + *Chermes* [Hemiptera]
Gender. Masculine
Note. Junior homonym of *Pseudochermes* Nitsche in Judeich and Nitsche 1895: 1248 (Hemiptera: Cryptococcidae). Replaced by *Lauferella* Lindinger 1933

capreae Börner 1942: 265 (*Phylloxerina*)
daphnoidis Iglisch 1965: 424 (*Phylloxerina*)
moniliferae (Börner 1931: 696) (*Guercioja*) new name for *Chermes populi* Gillette 1914; possible synonym of *Phylloxerina popularia* (Pergande)
=*populi* (Gillette 1914: 269) (*Chermes*) junior primary homonym of *Phylloxerina populi* (Del Guercio 1900)
nyssae (Pergande 1904: 269) (*Phylloxera*)
popularia (Pergande 1904: 266) (*Phylloxera*)
populi (Del Guercio 1900: 81,83) (*Chermes*)
prolifera (Oestlund 1887: 16) (*Phylloxera*)
salicis (Lichtenstein 1884: 616) (*Phylloxera*)
salicola (Pergande 1904: 267) (*Phylloxera*)

Index of genus-group and species-group names

coniferum Shimer 1869 – subspecies of *Phylloxera globosa*
corticalis Kaltenbach 1867 – *Phylloxera*
DACTYLOSPHAERA Shimer 1867 – synonym of *Phylloxera*
DAKTULOSPHAIRA Shimer 1866 – Phylloxerinae, Phylloxerini
danesii Grassi and Foà 1907 – *Foaiella*
daphnoidis Iglisch 1965 – *Phylloxerina*
davidsoni Duncan 1922 – *Phylloxera*
deplanata Pergande 1904 – *Phylloxera*
depressa Shimer 1869 – *Phylloxera*
devastatrix Pergande 1904 – *Phylloxera*
escorialensis Lichtenstein 1876 – synonym of *Phylloxera coccinea*
EUPHYLLOXERA Del Guercio 1908 – synonym of *Phylloxera*
florentina Targioni Tozzetti 1875 – synonym of *Phylloxera quercus*
foae Börner 1909a – *Phylloxera*
FOAIELLA Börner 1909b – Phylloxerinae, Phylloxerini
foveata Shimer 1869 – *Phylloxera*
foveola Pergande 1904 – *Phylloxera*
fraxini Stebbins 1910 – *Phylloxera*
georgiana Pergande 1904 – *Phylloxera*
glabra von Heyden 1837 – *Phylloxera*
globifera von Heyden 1837 – synonym of *Phylloxera coccinea*
globosa Shimer 1867 – *Phylloxera*
GUERCIOJA Mordvilko 1909 – synonym of *Phylloxerina*
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HYSTRICHIELLA Börner 1908b – synonym of *Phylloxera*
iaksuiense Kishida 1924 – *Aphanostigma*
iberica Staroselsky 1892 – synonym of *Phylloxera corticalis*
ilicis Grassi in Grassi et al. 1912 – *Phylloxera*
intermedia Pergande 1904 – *Phylloxera*
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kunugi Shinji 1943 – *Phylloxera*
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lichtensteinii Balbiani 1874 – synonym of *Phylloxera corticalis*
MICRACANTHAPHIS Grassi in Grassi et al. 1912 – synonym of *Phylloxera*
minima Shimer 1869 – *Phylloxera*
moniliferae Börner 1931 – *Phylloxerina*
MORITZIELLA Börner 1908b – synonym *Phylloxera*
NOTABILIA Mordvilko 1909 – synonym of *Phylloxera*
notabilis Pergande 1904 – *Phylloxera*
nyssae Pergande 1904 – *Phylloxerina*
OLEGIA Shaposhnikov 1979 – Phylloxerinae, Phylloxerini
PARAMORITZIELLA Grassi in Grassi et al. 1912 – synonym of *Phylloxera*
PARAPERGANDEA Börner 1930 – synonym of *Phylloxera*
PARAPHYLLOXERA Grassi in Grassi et al. 1912 – synonym of *Phylloxera*

PARTHENOPHYLLOXERA Grassi in Grassi et al. 1912 – synonym of *Phylloxera*
pemphigoides Donnadieu 1887 – synonym of *Daktulosphaira vitifoliae*
perforans Pergande 1904 – subspecies of *Phylloxera caryaesepta*
PERGANDEA Börner 1908b – synonym of *Phylloxera*
PERITYMBIA Westwood 1869 – synonym of *Daktulosphaira*
perniciosa Pergande 1904 – *Phylloxera*
pervastatrix Börner 1910 – synonym of *Daktulosphaira vitifoliae*
PHYLLOXERA Boyer de Fonscolombe 1834 – Phylloxerinae, Phylloxerini
PHYLLOXERELLA Grassi in Grassi et al. 1912 – synonym of *Phylloxera*
PHYLLOXERINA Börner 1908a – Phylloxerininae
PHYLLOXEROIDES Grassi in Grassi et al. 1912 – synonym of *Phylloxera*
picta Pergande 1904 – *Phylloxera*
pilosula Pergande 1904 – *Phylloxera*
piri Cholodkovsky 1904 – *Aphanostigma*
popularia Pergande 1904 – *Phylloxerina*
populi Del Guercio 1900 – *Phylloxerina*
populi Gillette 1914 – synonym of *Phylloxerina moniliferae*
prolifera Oestlund 1887 – *Phylloxerina*
PSEUDOCHERMES Bonfigli 1909 – synonym of *Phylloxerina*
PSYLLOPTERA Ferrari 1872 – synonym of *Phylloxera*
punctata Lichtenstein 1874b – synonym of *Phylloxera glabra*
purpurea Pergande 1904 – subspecies of *Phylloxera symmetrica*
querceti Pergande 1904 – *Phylloxera*
quercina Ferrari 1872 – *Phylloxera*
quercus Boyer de Fonscolombe 1834 – *Phylloxera*
quercus Kollar 1848 – *Acanthochermes*
reticulata Duncan 1922 – *Phylloxera*
RHANIS von Heyden 1837 – synonym of *Phylloxera*
RHIZAPHIS Planchon in Bazille et al. 1868 – synonym of *Daktulosphaira*
RHIZOCERA Despeissis 1896 – synonym of *Daktulosphaira*
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rutila Dreyfus 1889 – synonym of *Phylloxera coccinea*
salicis Lichtenstein 1884 – *Phylloxerina*
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scutifera Signoret 1867 – synonym of *Phylloxera quercus*
signoreti Targioni Tozzetti 1875 – synonym of *Phylloxera quercus*
similans Duncan 1922 – *Phylloxera*
similiquercus Jiang et al. 2009 – *Acanthochermes*
spinifera Pergande 1904 – *Phylloxera*
spinosa Shimer 1869 – *Phylloxera*
spinuloides Pergande 1904 – *Phylloxera*
spinulosa Targioni Tozzetti 1875 –synonym of *Phylloxera quercina*

stanfordiana Ferris 1919 – *Phylloxera*
stellata Duncan 1922 – *Phylloxera*
subelliptica Shimer 1869 – *Phylloxera*
symmetrica Pergande 1904 – *Phylloxera*
texana Stoetzel 1981 – *Phylloxera*
TROITZKYA Börner 1930 – synonym of *Phylloxera*
tuberculifera Duncan 1922 – *Phylloxera*
ulmifoliae Aoki 1973 – *Olegia*
VACUNA von Heyden 1837 – synonym of *Phylloxera*
vasculosa Pergande 1904 – subspecies of *Phylloxera symmetrica*
vastatrix Planchon in Bazille et al. 1868 – synonym of *Daktulosphaira vitifoliae*
VITEUS Shimer 1867 – synonym of *Daktulosphaira*
vitifoliae Fitch 1855 – *Daktulosphaira*
vitis viniferae Theobald 1914 – synonym of *Daktulosphaira vitifoliae*
vitisana Westwood 1869 – synonym of *Daktulosphaira vitifoliae*
vulpinae Börner 1952 – synonym of *Daktulosphaira vitifoliae*
XERAMPELUS Del Guercio 1900 – synonym of *Daktulosphaira*
XEROPHYLLA Walsh 1867 – synonym of *Phylloxera*

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